LED cleanroom – hygienic, efficient solution offering excellent vision at work

Cleanroom LED

Customers operating highly hygienic facilities – in hospitals, laboratories, and certain production environments, e.g. in the food industry – require special IP65, easy-to-clean, dust-free luminaires that meet all applicable lighting requirements and norms. With the latest LED engine on board, this LED cleanroom luminaire represents the ideal solution, delivering market-leading energy performance – far beyond fluorescent solutions – over 50,000 hours of maintenance-free operation. This means extremely low operational cost over the total lifetime of the luminaire, and so an excellent financial return on investment. The luminaire's high color rendering properties ensure the top-class optical performance required in e.g. clinical areas in hospitals and other areas where it is crucial to be able to distinguish between colors, such as in the graphical and clothing industries.

Benefits
• Excellent functional cleanroom performance
• Market-leading energy efficiency; extremely low operational cost over total lifetime
• Excellent quality of light with high color rendering

Features
• Latest LED engine
• IP65
• ISO class 2-9 Fraunhofer-certified
• CRI 90
• Push-in connector: connection without opening the luminaire
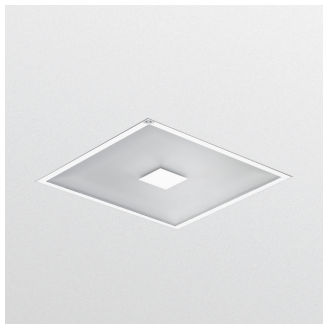
Cleanroom LED

Application
• Hygienic areas in hospitals and laboratories
• Production facilities in the clothing industry
• Graphic design studios

Specifications

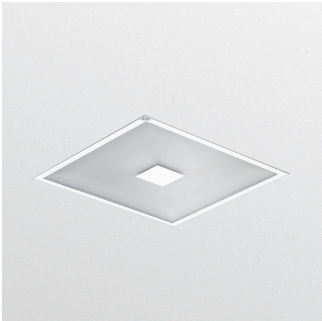|			
Type	CR434B (lay-in, 596 x 596 / 1196 x 296 mm version)	**Median useful life L90B50**	25,000 hours
	CR444B (lay-out, 612 x 612 / 1212 x 312 mm version)	**Driver failure rate**	1% per 5000 hours
	CR436B (lay-in, 621 x 621 / 1246 x 308 mm version)	**Average ambient temperature**	+25 ºC
	CR446B (lay-out, 637 x 637 / 1262x324 mm version)		
Ceiling type	Exposed T-bar ceiling	**Operating temperature range**	-20 to +35ºC
	Plaster (board) ceiling		
Ceiling grid	Module size in length: 300 and 600 mm	**Driver**	Built-in
	Module size in length: 312.5 and 625 mm	**Mains voltage**	220-240 V / 50-60 Hz
Light source	Replaceable LED module	**Dimming**	Touch-dim or DALI
Power (+/-10%)	LED48: 49.5 W	**Material**	Housing: sheet steel, laquerred
	LED88: 80 W		Cover: glass, tempered
Luminous flux	Square LED48: 3700 lm (3000 K) or 3500 lm (4000 K) (depending type)		Internal optic: aluminum
			Heatsink: aluminum sheet steel
	Square LED88: 6200 lm (3000 K) or 5700 lm (4000 K) (depending type)	**Color**	White RAL 9003
		Optical cover	AC-MLO
	Rectangular LED88: 6300 lm (3000 K) or 5700 lm (4000 K) (depending type)	**Connection**	Push-in connector
		Maintenance	No internal cleaning required
Correlated Color Temperature	3000 or 4000 K	**Installation**	Lay in: fixation with spring fastener
			Lay out: fixation with bolt and nuts
Color Rendering Index	> 80 (3000 and 4000 K)		No through-wiring
	> 90 (4000 K)		Installation without removing light source and optical cover (not in case of plaster-ceiling versions)
Median useful life L70B50	70,000 hours		
Median useful life L80B50	50,000 hours	**Accessories**	Safety cable

Versions

Cleanroom LED CR434B recessed luminaire

Cleanroom LED CR434B recessed luminaire

Cleanroom LED

Versions

Cleanroom LED CR436B recessed luminaire

Cleanroom LED CR436B recessed luminaire

Cleanroom LED CR444B recessed luminaire

Cleanroom LED CR444B recessed luminaire

Cleanroom LED CR446B recessed luminaire

Cleanroom LED CR446B recessed luminaire

Product details

Front view

Access to the optics, lamps and gear

Cleanroom LED

Product details

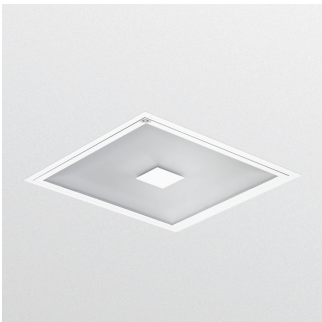Cleanroom LED CR434B recessed luminaire

Cleanroom LED CR434B recessed luminaire
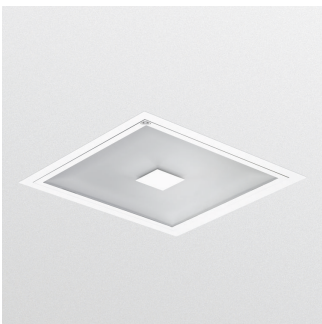
Cleanroom LED CR436B recessed luminaire

Cleanroom LED CR436B recessed luminaire

Cleanroom LED CR444B recessed luminaire

Cleanroom LED CR444B recessed luminaire

Cleanroom LED CR446B recessed luminaire

Cleanroom LED

Product details

Cleanroom LED CR446B recessed luminaire

Application Conditions

Ambient temperature range	-20 to +40 °C
Maximum dim level	1%
Suitable for random switching	No

Approval and Application

Mech. impact protection code	IK05
Ingress protection code	IP65

Controls and Dimming

Dimmable	Yes

Operating and Electrical

Input Voltage	220 to 240 V

General Information

Cap-Base	-
CE mark	CE mark
Protection class IEC	Safety class I
Optical cover/lens type	Acrylate micro-lens optic
Driver included	Yes
ENEC mark	ENEC plus mark
Flammability mark	For mounting on normally flammable surfaces
Glow-wire test	Temperature 850 °C, duration 5 s
Light source replaceable	No
Number of gear units	1 unit
Number of light sources	1 pc
Optic type	-
UL mark	-

Initial Performance (IEC Compliant)

Luminous flux tolerance	+/-10%

Mechanical and Housing

Color	White

General Information

Order Code	Full Product Name	Lamp family code	Product Family Code
910501978003	CR434B LED48/830 PSD W60L60 AC-MLO PI	LED48	CR434B
910501978103	CR434B LED48/840 PSD W60L60 AC-MLO PI	LED48	CR434B
910501978203	CR434B LED88/830 PSD W60L60 AC-MLO PI	LED88	CR434B
910501978303	CR434B LED88/840 PSD W60L60 AC-MLO PI	LED88	CR434B
910501984203	CR434B LED48/840 PSD W60L60 AC-MLO PI SC	LED48	CR434B
910501984303	CR434B LED88/840 PSD W60L60 AC-MLO PI SC	LED88	CR434B
910502032203	CR434B LED48/940 PSD W60L60 AC-MLO PI	LED48	CR434B
910502032303	CR434B LED88/940 PSD W60L60 AC-MLO PI	LED88	CR434B
910501978403	CR434B LED88/830 PSD W30L120 AC-MLO PI	LED88	CR434B
910501978503	CR434B LED88/840 PSD W30L120 AC-MLO PI	LED88	CR434B
910501984403	CR434B LED88/840 W30L120 AC-MLO PI SC	LED88	CR434B
910502032403	CR434B LED88/940 PSD W30L120 AC-MLO PI	LED88	CR434B
910501978703	CR436B LED48/840 PSD W62L62 AC-MLO PI	LED48	CR436B
910501978903	CR436B LED88/840 PSD W62L62 AC-MLO PI	LED88	CR436B
910502032503	CR436B LED48/940 PSD W62L62 AC-MLO PI	LED48	CR436B
910502032603	CR436B LED88/940 PSD W62L62 AC-MLO PI	LED88	CR436B
910501979103	CR436B LED88/840 PSD W31L125 AC-MLO PI	LED88	CR436B
910502032703	CR436B LED88/940 PSD W31L125 AC-MLO PI	LED88	CR436B
910501979203	CR444B LED48/830 PSD W60L60 AC-MLO PI	LED48	CR444B
910501979303	CR444B LED48/840 PSD W60L60 AC-MLO PI	LED48	CR444B
910501979503	CR444B LED88/840 PSD W60L60 AC-MLO PI	LED88	CR444B
910501984503	CR444B LED48/840 PSD W60L60 AC-MLO PI SC	LED48	CR444B
910502032803	CR444B LED48/940 PSD W60L60 AC-MLO PI	LED48	CR444B
910502032903	CR444B LED88/940 PSD W60L60 AC-MLO PI	LED88	CR444B
910501979703	CR444B LED88/840 PSD W30L120 AC-MLO PI	LED88	CR444B
910501984703	CR444B LED88/840 W30L120 AC-MLO PI SC	LED88	CR444B
910502033003	CR444B LED88/940 PSD W30L120 AC-MLO PI	LED88	CR444B
910501979903	CR446B LED48/840 PSD W62L62 AC-MLO PI	LED48	CR446B
910501980103	CR446B LED88/840 PSD W62L62 AC-MLO PI	LED88	CR446B
910502033103	CR446B LED48/940 PSD W62L62 AC-MLO PI	LED48	CR446B
910502033203	CR446B LED88/940 PSD W62L62 AC-MLO PI	LED88	CR446B
910502033303	CR446B LED88/940 PSD W31L125 AC-MLO PI	LED88	CR446B

Cleanroom LED

Initial Performance (IEC Compliant) (1/2)

Order Code	Full Product Name	Initial chromaticy	Init. Corr. Color Temperature	Init. Color Rendering Index	Initial LED luminaire efficacy
910501978003	CR434B LED48/830 PSD W60L60 AC-MLO PI	(0.43, 0.40) SDCM <3	3000 K	≥80	113 lm/W
910501978103	CR434B LED48/840 PSD W60L60 AC-MLO PI	(0.38, 0.38) SDCM <3	4000 K	≥80	120 lm/W
910501978203	CR434B LED88/830 PSD W60L60 AC-MLO PI	(0.43, 0.40) SDCM <3	3000 K	≥80	109 lm/W
910501978303	CR434B LED88/840 PSD W60L60 AC-MLO PI	(0.38, 0.38) SDCM <3	4000 K	≥80	115 lm/W
910501984203	CR434B LED48/840 PSD W60L60 AC-MLO PI SC	(0.38, 0.38) SDCM <3	4000 K	≥80	120 lm/W
910501984303	CR434B LED88/840 PSD W60L60 AC-MLO PI SC	(0.38, 0.38) SDCM <3	4000 K	≥80	115 lm/W
910502032203	CR434B LED48/940 PSD W60L60 AC-MLO PI	(0.38, 0.38) SDCM <3	4000 K	≥90	96 lm/W
910502032303	CR434B LED88/940 PSD W60L60 AC-MLO PI	(0.38, 0.38) SDCM <3	4000 K	≥90	93 lm/W
910501978403	CR434B LED88/830 PSD W30L120 AC-MLO PI	(0.43, 0.40) SDCM <3	3000 K	≥80	109 lm/W
910501978503	CR434B LED88/840 PSD W30L120 AC-MLO PI	(0.38, 0.38) SDCM <3	4000 K	≥80	115 lm/W
910501984403	CR434B LED88/840 W30L120 AC-MLO PI SC	(0.38, 0.38) SDCM <3	4000 K	≥80	115 lm/W
910502032403	CR434B LED88/940 PSD W30L120 AC-MLO PI	(0.38, 0.38) SDCM <3	4000 K	≥90	93 lm/W
910501978703	CR436B LED48/840 PSD W62L62 AC-MLO PI	(0.38, 0.38) SDCM <3	4000 K	≥80	120 lm/W
910501978903	CR436B LED88/840 PSD W62L62 AC-MLO PI	(0.38, 0.38) SDCM <3	4000 K	≥80	115 lm/W
910502032503	CR436B LED48/940 PSD W62L62 AC-MLO PI	(0.38, 0.38) SDCM <3	4000 K	≥90	96 lm/W
910502032603	CR436B LED88/940 PSD W62L62 AC-MLO PI	(0.38, 0.38) SDCM <3	4000 K	≥80	93 lm/W
910501979103	CR436B LED88/840 PSD W31L125 AC-MLO PI	(0.38, 0.38) SDCM <3	4000 K	≥80	115 lm/W
910502032703	CR436B LED88/940 PSD W31L125 AC-MLO PI	(0.38, 0.38) SDCM <3	4000 K	≥80	93 lm/W
910501979203	CR444B LED48/830 PSD W60L60 AC-MLO PI	(0.43, 0.40) SDCM <3	3000 K	≥80	113 lm/W
910501979303	CR444B LED48/840 PSD W60L60 AC-MLO PI	(0.38, 0.38) SDCM <3	4000 K	≥80	120 lm/W
910501979503	CR444B LED88/840 PSD W60L60 AC-MLO PI	(0.38, 0.38) SDCM <3	4000 K	≥80	115 lm/W
910501984503	CR444B LED48/840 PSD W60L60 AC-MLO PI SC	(0.38, 0.38) SDCM <3	4000 K	≥80	120 lm/W
910502032803	CR444B LED48/940 PSD W60L60 AC-MLO PI	(0.38, 0.38) SDCM <3	4000 K	≥80	96 lm/W
910502032903	CR444B LED88/940 PSD W60L60 AC-MLO PI	(0.38, 0.38) SDCM <3	4000 K	≥80	93 lm/W

Cleanroom LED

Order Code	Full Product Name	Initial chromaticity	Init. Corr. Color Temperature	Init. Color Rendering Index	Initial LED luminaire efficacy
910501979703	CR444B LED88/840 PSD W30L120 AC-MLO PI	(0.38, 0.38) SDCM <3	4000 K	≥80	115 lm/W
910501984703	CR444B LED88/840 W30L120 AC-MLO PI SC	(0.38, 0.38) SDCM <3	4000 K	≥80	115 lm/W
910502033003	CR444B LED88/940 PSD W30L120 AC-MLO PI	(0.38, 0.38) SDCM <3	4000 K	≥80	93 lm/W
910501979903	CR446B LED48/840 PSD W62L62 AC-MLO PI	(0.38, 0.38) SDCM <3	4000 K	≥80	120 lm/W
910501980103	CR446B LED88/840 PSD W62L62 AC-MLO PI	(0.38, 0.38) SDCM <3	4000 K	≥80	115 lm/W
910502033103	CR446B LED48/940 PSD W62L62 AC-MLO PI	(0.38, 0.38) SDCM <3	4000 K	≥80	96 lm/W
910502033203	CR446B LED88/940 PSD W62L62 AC-MLO PI	(0.38, 0.38) SDCM <3	4000 K	≥80	93 lm/W
910502033303	CR446B LED88/940 PSD W31L125 AC-MLO PI	(0.38, 0.38) SDCM <3	4000 K	≥80	93 lm/W

Initial Performance (IEC Compliant) (2/2)

Order Code	Full Product Name	Initial luminous flux	Initial input power
910501978003	CR434B LED48/830 PSD W60L60 AC-MLO PI	3600 lm	32 W
910501978103	CR434B LED48/840 PSD W60L60 AC-MLO PI	3900 lm	32.5 W
910501978203	CR434B LED88/830 PSD W60L60 AC-MLO PI	6000 lm	55 W
910501978303	CR434B LED88/840 PSD W60L60 AC-MLO PI	6300 lm	55 W
910501984203	CR434B LED48/840 PSD W60L60 AC-MLO PI SC	3900 lm	32.5 W
910501984303	CR434B LED88/840 PSD W60L60 AC-MLO PI SC	6300 lm	55 W
910502032203	CR434B LED48/940 PSD W60L60 AC-MLO PI	3900 lm	40.5 W
910502032303	CR434B LED88/940 PSD W60L60 AC-MLO PI	6300 lm	68 W
910501978403	CR434B LED88/830 PSD W30L120 AC-MLO PI	6000 lm	55 W
910501978503	CR434B LED88/840 PSD W30L120 AC-MLO PI	6300 lm	55 W
910501984403	CR434B LED88/840 W30L120 AC-MLO PI SC	6300 lm	55 W
910502032403	CR434B LED88/940 PSD W30L120 AC-MLO PI	6300 lm	68 W
910501978703	CR436B LED48/840 PSD W62L62 AC-MLO PI	3900 lm	32.5 W
910501978903	CR436B LED88/840 PSD W62L62 AC-MLO PI	6300 lm	55 W
910502032503	CR436B LED48/940 PSD W62L62 AC-MLO PI	3900 lm	40.5 W
910502032603	CR436B LED88/940 PSD W62L62 AC-MLO PI	6300 lm	68 W
910501979103	CR436B LED88/840 PSD W31L125 AC-MLO PI	6300 lm	55 W
910502032703	CR436B LED88/940 PSD W31L125 AC-MLO PI	6300 lm	68 W
910501979203	CR444B LED48/830 PSD W60L60 AC-MLO PI	3600 lm	32 W
910501979303	CR444B LED48/840 PSD W60L60 AC-MLO PI	3900 lm	32.5 W
910501979503	CR444B LED88/840 PSD W60L60 AC-MLO PI	6300 lm	55 W
910501984503	CR444B LED48/840 PSD W60L60 AC-MLO PI SC	3900 lm	32.5 W
910502032803	CR444B LED48/940 PSD W60L60 AC-MLO PI	3900 lm	40.5 W
910502032903	CR444B LED88/940 PSD W60L60 AC-MLO PI	6300 lm	68 W
910501979703	CR444B LED88/840 PSD W30L120 AC-MLO PI	6300 lm	55 W
910501984703	CR444B LED88/840 W30L120 AC-MLO PI SC	6300 lm	55 W
910502033003	CR444B LED88/940 PSD W30L120 AC-MLO PI	6300 lm	68 W
910501979903	CR446B LED48/840 PSD W62L62 AC-MLO PI	3900 lm	32.5 W

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Order Code	Full Product Name	Initial luminous flux	Initial input power
910501980103	CR446B LED88/840 PSD W62L62 AC-MLO PI	6300 lm	55 W
910502033103	CR446B LED48/940 PSD W62L62 AC-MLO PI	3900 lm	40.5 W

Order Code	Full Product Name	Initial luminous flux	Initial input power
910502033203	CR446B LED88/940 PSD W62L62 AC-MLO PI	6300 lm	68 W
910502033303	CR446B LED88/940 PSD W31L125 AC-MLO PI	6300 lm	68 W

Mechanical and Housing

Order Code	Full Product Name	Geometry
910501978003	CR434B LED48/830 PSD W60L60 AC-MLO PI	Width 0.60 m, length 0.60 m
910501978103	CR434B LED48/840 PSD W60L60 AC-MLO PI	Width 0.60 m, length 0.60 m
910501978203	CR434B LED88/830 PSD W60L60 AC-MLO PI	Width 0.60 m, length 0.60 m
910501978303	CR434B LED88/840 PSD W60L60 AC-MLO PI	Width 0.60 m, length 0.60 m
910501984203	CR434B LED48/840 PSD W60L60 AC-MLO PI SC	Width 0.60 m, length 0.60 m
910501984303	CR434B LED88/840 PSD W60L60 AC-MLO PI SC	Width 0.60 m, length 0.60 m
910502032203	CR434B LED48/940 PSD W60L60 AC-MLO PI	Width 0.60 m, length 0.60 m
910502032303	CR434B LED88/940 PSD W60L60 AC-MLO PI	Width 0.60 m, length 0.60 m
910501978403	CR434B LED88/830 PSD W30L120 AC-MLO PI	Width 0.30 m, length 1.20 m
910501978503	CR434B LED88/840 PSD W30L120 AC-MLO PI	Width 0.30 m, length 1.20 m
910501984403	CR434B LED88/840 W30L120 AC-MLO PI SC	Width 0.30 m, length 1.20 m
910502032403	CR434B LED88/940 PSD W30L120 AC-MLO PI	Width 0.30 m, length 1.20 m
910501978703	CR436B LED48/840 PSD W62L62 AC-MLO PI	Width 0.62 m, length 0.62 m
910501978903	CR436B LED88/840 PSD W62L62 AC-MLO PI	Width 0.62 m, length 0.62 m
910502032503	CR436B LED48/940 PSD W62L62 AC-MLO PI	Width 0.62 m, length 0.62 m
910502032603	CR436B LED88/940 PSD W62L62 AC-MLO PI	Width 0.62 m, length 0.62 m

Order Code	Full Product Name	Geometry
910501979103	CR436B LED88/840 PSD W31L125 AC-MLO PI	Width 0.31 m, length 1.25 m
910502032703	CR436B LED88/940 PSD W31L125 AC-MLO PI	Width 0.31 m, length 1.25 m
910501979203	CR444B LED48/830 PSD W60L60 AC-MLO PI	Width 0.60 m, length 0.60 m
910501979303	CR444B LED48/840 PSD W60L60 AC-MLO PI	Width 0.60 m, length 0.60 m
910501979503	CR444B LED88/840 PSD W60L60 AC-MLO PI	Width 0.60 m, length 0.60 m
910501984503	CR444B LED48/840 PSD W60L60 AC-MLO PI SC	Width 0.60 m, length 0.60 m
910502032803	CR444B LED48/940 PSD W60L60 AC-MLO PI	Width 0.60 m, length 0.60 m
910502032903	CR444B LED88/940 PSD W60L60 AC-MLO PI	Width 0.60 m, length 0.60 m
910501979703	CR444B LED88/840 PSD W30L120 AC-MLO PI	Width 0.30 m, length 1.20 m
910501984703	CR444B LED88/840 W30L120 AC-MLO PI SC	Width 0.30 m, length 1.20 m
910502033003	CR444B LED88/940 PSD W30L120 AC-MLO PI	Width 0.30 m, length 1.20 m
910501979903	CR446B LED48/840 PSD W62L62 AC-MLO PI	Width 0.62 m, length 0.62 m
910501980103	CR446B LED88/840 PSD W62L62 AC-MLO PI	Width 0.62 m, length 0.62 m
910502033103	CR446B LED48/940 PSD W62L62 AC-MLO PI	Width 0.62 m, length 0.62 m
910502033203	CR446B LED88/940 PSD W62L62 AC-MLO PI	Width 0.62 m, length 0.62 m
910502033303	CR446B LED88/940 PSD W31L125 AC-MLO PI	Width 0.31 m, length 1.25 m

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